

WHAT IS CLAIMED IS:

1. A bolt protection apparatus for use with a bolt inserted into an opening in a piece of lumber, the bolt protector comprising:

5 a first means for surrounding and preventing at least one portion of the bolt from contacting the sidewall of the opening; and

a second means for assisting in fixing the position of at least a portion of the first means in the opening  
10 when the first means surrounds the at least one portion of the bolt and is inserted in the opening.

2. The bolt protection apparatus of Claim 1,  
wherein the second means is a separate piece from  
15 the first means and is in contact with the first means.

3. The bolt protection apparatus of Claim 1,  
wherein the second means is integrally formed with  
the first means.

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4. The bolt protection apparatus of Claim 3,  
wherein the first means comprises a tubular  
structure; and

wherein the second means comprises a washer-like  
25 structure substantially perpendicular to the tubular  
structure and integrally formed therewith.

5. The bolt protection apparatus of Claim 3,  
wherein the first means comprises a tubular  
30 structure; and

wherein the second means comprises a plurality of  
fins integrally formed on the tubular structure.

6. The bolt protection apparatus of Claim 1,  
wherein the first means and second means are  
constructed from a material that resists corrosion when  
5 in contact with the piece of lumber and retards corrosion  
of the bolt, wherein the bolt is metal.

7. The bolt protection apparatus of Claim 1,  
wherein the first means and second means are  
10 constructed from a material that resists corrosion when  
in contact with the piece of lumber and retards corrosion  
of the bolt, wherein the bolt is steel.

8. The bolt protection apparatus of Claim 1,  
15 wherein the first means is constructed from a  
plastic material.

9. The bolt protection apparatus of Claim 1,  
wherein the first means is substantially rigid.

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10. The bolt protection apparatus of Claim 1,  
wherein the first means is flexible.

11. The bolt protection apparatus of Claim 4,  
25 wherein the first means is constructed from a  
plastic material and is substantially rigid.

12. The bolt protection apparatus of Claim 11,  
wherein the first means further performs the  
30 function of retarding corrosion of the bolt by chemicals  
in the piece of lumber.

13. A method for building a structure, comprising:  
attaching a plurality of bolts to a building  
foundation such that a first end of each bolt protrudes  
from the foundation;

5 surrounding a portion of a first bolt comprising one  
of the plurality of bolts with a protective sleeve; and  
disposing a piece of lumber and the first bolt  
relative to one another such that at least a portion of  
the first bolt and at least a portion of the protective  
10 sleeve pass through an opening in the piece of lumber and  
wherein the protective sleeve prevents at least a portion  
of the first bolt from contacting the sidewall of the  
opening.

15 14. The method of Claim 13  
wherein the foundation is a pier and beam  
foundation.

15. The method of Claim 13  
20 wherein the foundation is a slab foundation.

16. The method of Claim 13, further comprising:  
placing a first washer over the first end of the  
first bolt after it has passed through the opening.

25 17. The method of Claim 16, further comprising:  
attaching a nut to the first end of the first bolt.

18. The method of Claim 17,  
30 wherein the first washer prevents the nut from  
contacting the piece of lumber.

19. The method of Claim 16, further comprising:  
placing a second washer on top of the first washer;  
attaching a nut to the first end of the first bolt;  
and

5        wherein the first washer prevents the second washer  
from contacting the piece of lumber.

20. The method of Claim 13,  
wherein the piece of lumber comprises chemicals  
10    corrosive to steel.

21. The method of Claim 16,  
wherein the piece of lumber comprises chemicals  
corrosive to steel.  
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22. The method of Claim 19,  
wherein the piece of lumber comprises chemicals  
corrosive to steel.

20        23. The method of Claim 13,  
wherein the protective sleeve comprises a generally  
tubular structure which prevents any portion of the first  
bolt from contacting the sidewall of the opening.

25        24. The method of Claim 23,  
wherein the protective sleeve further comprises a  
washer-like structure substantially perpendicular to the  
tubular structure and integrally formed therewith.

25. The method of Claim 23,  
wherein the protective sleeve further comprises a  
plurality of fins integrally formed on the tubular  
structure.

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26. The method of Claim 23,  
wherein the tubular structure comprises a plurality  
of tubular segments.

10 27. The method of Claim 24, wherein the protective  
sleeve is constructed from a plastic material.

28. The method of Claim 27, wherein the protective  
sleeve retards corrosion of the first bolt by chemicals  
15 in the piece of lumber.

29. The method of Claim 13, wherein the protective  
sleeve retards corrosion of the first bolt by chemicals  
in the piece of lumber.

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30. The method of Claim 23, wherein the protective  
sleeve retards corrosion of the first bolt by chemicals  
in the piece of lumber.

25 31. The method of Claim 23, further comprising:  
placing a first washer over the first end of the  
first bolt after it has passed through the opening.

32. The method of Claim 31, further comprising:  
30 attaching a nut to the first end of the first bolt.

33. The method of Claim 32,  
wherein the first washer prevents the nut from  
contacting the piece of lumber.

5        34. The method of Claim 31, further comprising:  
      placing a second washer on top of the first washer;  
      attaching a nut to the first end of the first bolt;  
and  
      wherein the first washer prevents the second washer  
10 from contacting the piece of lumber.

35. The method of Claim 31, wherein the protective  
sleeve retards corrosion of the first bolt by chemicals  
in the piece of lumber.

36. A building structure, comprising:

a foundation;

a first bolt attached to the foundation with a first  
end protruding from the foundation;

5 a protective sleeve surrounding at least a portion  
of the first bolt;

a piece of lumber having an opening therein, wherein  
the piece of lumber is disposed relative to the first  
bolt such that at least a portion of the first bolt and  
10 at least a portion of the protective sleeve pass through  
an opening in the piece of lumber and wherein the  
protective sleeve prevents at least a portion of the  
first bolt from contacting the sidewall of the opening.

15 37. The building structure of Claim 36, further  
comprising:

a first washer placed over the first end of the  
first bolt after it has passed through the opening.

20 38. The building structure of Claim 37, further  
comprising:

a nut attached to the first end of the first bolt.

39. The building structure of Claim 38,

25 wherein the first washer prevents the nut from  
contacting the piece of lumber.

40. The building structure of Claim 37, further comprising:

a second washer placed on top of the first washer;  
a nut attached to the first end of the first bolt;

5 and

wherein the first washer prevents the second washer from contacting the piece of lumber.

41. The building structure of Claim 36,

10 wherein the piece of lumber comprises chemicals corrosive to steel.

42. The method of Claim 37,

15 wherein the piece of lumber comprises chemicals corrosive to steel.

43. The method of Claim 40,

20 wherein the piece of lumber comprises chemicals corrosive to steel.

44. The building structure of Claim 36,

25 wherein the protective sleeve comprises a generally tubular structure which prevents any portion of the first bolt from contacting the sidewall of the opening.

45. The building structure of Claim 44,

wherein the protective sleeve further comprises a washer-like structure substantially perpendicular to the tubular structure and integrally formed therewith.



46. The building structure of Claim 44,  
wherein the protective sleeve further comprises a  
plurality of fins integrally formed on the tubular  
structure.

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47. The building structure of Claim 44,  
wherein the tubular structure comprises a plurality  
of tubular segments.

10 48. The building structure of Claim 45, wherein the  
protective sleeve is constructed from a plastic material.

49. The building structure of Claim 48, wherein the  
protective sleeve retards corrosion of the first bolt by  
15 chemicals in the piece of lumber.

50. The building structure of Claim 36, wherein the  
protective sleeve retards corrosion of the first bolt by  
chemicals in the piece of lumber.

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51. The building structure of Claim 44, wherein the  
protective sleeve retards corrosion of the first bolt by  
chemicals in the piece of lumber.

25 52. The building structure of Claim 44, further  
comprising:

a first washer placed over the first end of the  
first bolt after it has passed through the opening.

30 53. The building structure of Claim 52, further  
comprising:

a nut attached to the first end of the first bolt.

54. The building structure of Claim 53,  
wherein the first washer prevents the nut from  
contacting the piece of lumber.

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55. The building structure of Claim 52, further  
comprising:

a second washer placed on top of the first washer;  
a nut attached to the first end of the first bolt;

10 and

wherein the first washer prevents the second washer  
from contacting the piece of lumber.

56. The building structure of Claim 52, wherein  
15 the protective sleeve retards corrosion of the first bolt  
by chemicals in the piece of lumber.

57. An apparatus, comprising:  
an object;  
a first bolt having a first end;  
a protective sleeve surrounding at least a portion  
5 of the first bolt;  
a piece of lumber attached to the object, wherein  
the piece of lumber is attached to the object using the  
first bolt wherein the piece of lumber is disposed  
relative to the first bolt such that at least a portion  
10 of the first bolt and at least a portion of the  
protective sleeve pass through an opening in the piece of  
lumber and wherein the protective sleeve prevents at  
least a portion of the first bolt from contacting the  
sidewall of the opening.

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58. The apparatus of Claim 57,  
wherein the object comprises a second piece of  
lumber.

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59. The apparatus of Claim 57,  
wherein the object comprises a building foundation.

60. The apparatus of Claim 57,  
wherein the protective sleeve comprises a generally  
25 tubular structure which prevents any portion of the first  
bolt from contacting the sidewall of the opening.

61. The apparatus of Claim 60,  
wherein the protective sleeve further comprises a  
30 washer-like structure substantially perpendicular to the  
tubular structure and integrally formed therewith.

62. The apparatus of Claim 60,  
wherein the protective sleeve further comprises a  
plurality of fins integrally formed on the tubular  
structure.

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63. The apparatus of Claim 60,  
wherein the tubular structure comprises a plurality  
of tubular segments.

10 64. The apparatus of Claim 61, wherein the  
protective sleeve is constructed from a plastic material.

65. The apparatus of Claim 64, wherein the  
protective sleeve retards corrosion of the first bolt by  
15 chemicals in the piece of lumber.

66. The apparatus of Claim 57, wherein the  
protective sleeve retards corrosion of the first bolt by  
chemicals in the piece of lumber.

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67. The apparatus of Claim 60, wherein the  
protective sleeve retards corrosion of the first bolt by  
chemicals in the piece of lumber.

25 68. The apparatus of Claim 60, further comprising:  
a first washer placed over the first end of the  
first bolt after it has passed through the opening.

69. The apparatus of Claim 68, further comprising:  
30 a nut attached to the first end of the first bolt.

70. The apparatus of Claim 69,  
wherein the first washer prevents the nut from  
contacting the piece of lumber.

5        71. The apparatus of Claim 68, further comprising:  
a second washer placed on top of the first washer;  
a nut attached to the first end of the first bolt;  
and  
wherein the first washer prevents the second washer  
10 from contacting the piece of lumber.

72. The apparatus of Claim 68, wherein the  
protective sleeve retards corrosion of the first bolt by  
chemicals in the piece of lumber.